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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,477	08/23/2001	Sung-Kyun Park	P-218	8429

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EXAMINER

NALVEN, ANDREW L

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

09/934,477

Applicant(s)

PARK, SUNG-KYUN

Examiner

Andrew L Nalven

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-27 are pending.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 24-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The cited claims are directed to an access-request message. The claimed access-request message is an inoperative non-tangible data structure. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). The claimed data structure does not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 is an open-ended "comprising" type claim that provides the limitations of a temporary randomly generated authenticator, a user password, and a message digest. It is unclear to the Examiner what the step of "replacing the value of the authenticator field" entails. It appears to implicitly provide a negative limitation of removing from the claim the temporary randomly generated authenticator value.

6. Claim 5 presents the limitation "decoding the access-request message." It is unclear to the Examiner what data is being decoded. Examiner can find no limitation in a parent claim of encoded data. Claim 1 presents the limitation "executing an encryption algorithm," however; the encryption algorithm is operable to produce a message digest. A message digest is a result of a one-way function and thus decoding is not feasible.

7. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the informing or indication that the AAA server has knowledge of the temporary authenticator value. It is unclear to the Examiner how the AAA server would perform the step of "verifying the access-

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request message” when the temporary authenticator value of the message has been replaced.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claim 20 is rejected under 35 U.S.C. 102(e) as being anticipated by Hluchyj et al US Patent No. 6,282,193.

9. With regards to claim 20, Hluchyj teaches authenticating an access-request message prior to performing user authentication of the access-request message (Hluchyj, column 3 lines 49-57, authentication, column 6 lines 1-19, error correction).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-2, 8-9, 11-14, 15-18, 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rigney et al RFC 2138 in view of Rigney et al RFC 2139.

12. With regards to claims 1 (as best understood), 12, 14, 17-18, 24-26, Rigney RFC 2138 teaches writing a temporary randomly generated authenticator value in an attribute field of an access-request message (Rigney RFC 2138, Page 11, "Request Authenticator" value should be unpredictable and unique), encrypting a user password using the temporary authenticator value (Rigney RFC 2138, Page 12, shared secret followed by Request Authenticator is hashed used to XOR password, 16 octect, Page 22 Section 5.2), transmitting the final access request message to an Authentication, Authorization, and Accounting server (Rigney RFC 2138, Page 6, receives request), and verifying the access-request message by the AAA server (Rigney RFC 2138, Page 6, validates sending client). Rigney RFC 2138 fails to teach the executing of an encryption algorithm to generate a message digest and the filling of fields of a request message. Rigney RFC 2139 teaches executing an encryption algorithm using the access request message having the temporary authenticator value and the encrypted user password to generate a message digest (Rigney, RFC 2139, Page 5, Request Authenticator), the access request message having an authenticator field that is filled with a prescribed value, generating a final access-request message by replacing the value of the authenticator field with the message digest (Rigney, RFC 2139, Page 5, Request Authenticator, MD5 hash placed in authenticator field). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Rigney RFC 2139's method of creating message digests with Rigney's RFC 2138

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because it offers the advantage of allowing a method of authenticating messages between a client and accounting server (Rigney RFC 2139 Page 5 "Authenticator).

13. With regards to claims 2, 16, Rigney as modified teaches the prescribed value is a value previously defined between a foreign agent and the AAA server (Rigney, RFC 2139, Page 5, Request Authenticator, nas and radius accounting server share a secret).

14. With regards to claims 8, 13, 15 and 27, Rigney as modified teaches the randomly generated authenticator value being created differently every time a message is generated (Rigney RFC 2138, Page 11, "Request Authenticator" value should be unpredictable and unique).

15. With regards to claim 9, Rigney teaches the writing of an authenticator value for authenticating an access-request message in an authenticator field of an access-request message and transmitting an access request message (Rigney RFC 2138, Page 11, "Request Authenticator" value should be unpredictable and unique), verifying the access-request message by using the authenticator value of the access-request message when the access-request message is received (Rigney RFC 2138, Page 6, validates sending client), decoding the access-request message if the access-request message is successfully verified (Rigney RFC 2138, Page 6, validates sending client)

16. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rigney et al RFC 2138 in view of Rigney et al RFC 2139, as applied to claim 9 above, and in further view of Morgan et al US Patent No. 6,088,799.

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17. With regards to claim 11, Rigney as modified teaches an encrypted user password written in an attribute field of an access-request message (Rigney RFC 2138, Page 12), but fails to teach the decrypting of the user password and comparison with a stored user password. Morgan teaches decrypting the user password (Morgan, column 7 line 66 – column 8 line 16), comparing the decrypted user password and a user password stored in a database (Morgan, column 8 lines 4-7), determining that the user authentication is successful if the decrypted password and the stored user password are identical to each other and determining that the user authentication has failed if the decrypted user password and the stored user password are not identical to each other (Morgan, column 8 lines 7-16). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Morgan's password checking system with Rigney as modified because it offers the advantage of ensuring that only authenticated user's gain access to sensitive data such as encryption keys (Morgan, column 3 line 65 – column 4 line 7).

***Allowable Subject Matter***

18. Claims 3-7, 10, 19, 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

19. The following is a statement of reasons for the indication of allowable subject matter:



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20. With regards to claims 3-7, 10, 19, 21-23, the cited claims provide limitations requiring "temporarily storing the contents of the authenticator field of the access-request message; filling the authenticator field with the prescribed value; performing an encrypting algorithm to obtain a message digest; and verifying the access-request message by comparing the temporarily stored authenticator value to the message digest." The cited prior art fails to specifically teach or suggest the steps of temporarily storing the contents of the authenticator field, re-filling the authenticator field with the prescribed value, and obtaining a message digest as defined in the cited claim. Thus the cited prior art fails to anticipate or render obvious the above-cited claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L. Nalven whose telephone number is 571 272 3839. The examiner can normally be reached on Monday - Thursday 8-6, Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on 571 272 3838. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

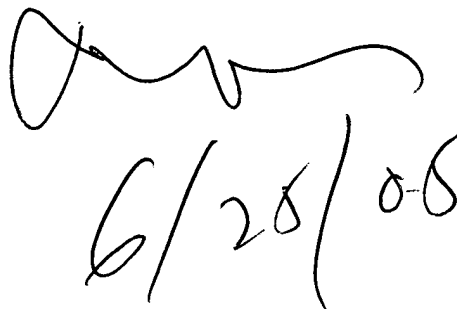
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew Nalven



David Y. Jung  
Primary Examiner



6/28/08